

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

**UNITED STATES SECURITIES  
AND EXCHANGE COMMISSION,**

**Plaintiff,**

**v.**

**ANDREAS BADIAN, JACOB  
SPINNER, MOTTES DRILLMAN,  
JEFFREY “DANNY” GRAHAM,  
POND SECURITIES CORPORATION  
D/B/A POND EQUITIES,  
EZRA BIRNBAUM AND SHANE HIRSCH,**

**Defendants.**

**No. 06-CV-2621 LTS (DFE)**

**SUR-REBUTTAL EXPERT REPORT  
STEPHEN D. PROWSE, PH.D, CFA  
TSVETAN N. BELORESHKI  
FTI CONSULTING, INC.  
MARCH 8, 2010**

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## I. INTRODUCTION AND SUMMARY

1. We have been retained by counsel for Mr. Andreas Badian and asked to review the expert reports submitted by Dr. Lawrence R. Glosten and Dr. Charles M. Jones<sup>1</sup> on February 10, 2010, including the report which discusses the Prowse-Beloreshki expert report (the “Glosten-Jones Report”). In addition, we have been asked to perform economic, financial and statistical analyses in order to answer the following questions:

- Whether the Glosten-Jones Report conclusions related to the reliability of the statistical analyses presented in the Prowse-Beloreshki Report are supported by the empirical evidence in this matter?<sup>2</sup>
- Whether the Glosten-Jones Report data and methodology can be relied upon in analyzing the effect of the market transactions executed by Rhino in Sedona’s equity shares on the performance of Sedona stock?

2. Briefly, our conclusions are the following:

- The Glosten-Jones Report conclusions related to the reliability of the statistical analyses presented in the Prowse-Beloreshki Report are not supported by the empirical evidence in this matter.

The basis for this opinion is discussed in section II.

- The Glosten-Jones Report’s data, analyses and conclusions related to the effect of Rhino’s transactions on the performance of Sedona stock are fundamentally flawed and cannot be relied upon.

The basis for this opinion is discussed in section III.

3. The relevant materials reviewed and materials relied upon in the preparation of this report are listed in Exhibit 1.

### *Exhibit 1. Documents Reviewed in Preparation of the Sur-Rebuttal Report*

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<sup>1</sup> In this matter, Drs. Glosten and Jones are advised by Dr. Frederick C. Dunbar, an Economic Fellow in the Office of Economic Analysis of the US Securities and Exchange Commission. Dr. Dunbar is the founder and past head of the Securities practice at NERA Economic Consulting (“NERA”).

<sup>2</sup> In this expert report, we adopt all the abbreviations used in our expert report dated November 24, 2009 (the “Prowse-Beloreshki Report”).

## **II. THE GLOSTEN-JONES REPORT'S CONCLUSIONS RELATED TO THE RELIABILITY OF THE STATISTICAL ANALYSES PRESENTED IN THE PROWSE-BELORESHKI REPORT ARE NOT SUPPORTED BY THE EMPIRICAL EVIDENCE**

4. As an initial observation, the analyses and conclusions presented in the Glosten-Jones Report are informed by the authors' deficient understanding of the economics and salient characteristics of the instruments at issue. As a result, these analyses and conclusions are fundamentally flawed and cannot be relied upon.

5. This section discusses some of the Glosten-Jones critiques of the quantitative analyses performed and presented in the Prowse-Beloreshki Report.

### **A. Selection of appropriate time frame**

6. The Glosten-Jones Report critiques the Prowse-Beloreshki Report selection of time periods over which analyses are performed.

7. In order to provide economically meaningful analyses, the selection of the two time periods in the Prowse-Beloreshki Report was driven solely by objective factors.

8. The first period (June 26, 2000 – June 14, 2002) is reasonable given that it encompasses the entire period when Rhino traded in Sedona shares and, thus, allows for analyses using all available data related to Rhino's market activities.

9. The second time period (March 1, 2001 – May 31, 2001) is also reasonable given the Complaint's focus on the potential for manipulation during conversion look-back periods (that time period encompasses six of the nine<sup>3</sup> conversion periods and includes 87% of the total dollar amount converted in 2001).

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<sup>3</sup> Of these nine conversion periods, we understand that only the last eight were related to the convertible debentures at issue.

10. In addition, our selection of time periods was informed by the following factors:

- The Complaint provides numerous time frames for the alleged manipulative behavior. In other words, it fails to provide a single and robust definition of the relevant time frame. Indeed, paragraph 2 of the Complaint alone puts forward three time frames in: (i) March 2001, (ii) March 1, 2001 – March 23, 2001, and (iii) January 26, 2001 – March 23, 2001 (see also paragraph 30).<sup>4</sup>
- The numerous time frames put forward in the Complaint are not consistent with the economics of the convertible debentures, underlying stock, and alleged manipulative behavior. Among other things, the Complaint fails to justify the selective focus on time frames that (i) are not consistent with the five-day conversion look-back periods; and (ii) fail to incorporate all (or at least a substantial portion) of such conversion periods.
- The uncertainty as to plaintiff's ultimate reliance on the time frame(s) as defined in the Complaint. Indeed, the analyses performed by plaintiff's experts rely on multiple time periods and do not correlate with the time periods mentioned in the Complaint.
- The absence of an affirmative theory of manipulation or any economic or quantitative analyses put forward through an expert report prepared by plaintiff's expert(s).

11. Whatever the time period chosen – whether by the Prowse-Beloreshki Report or the Glosten-Jones Report – the empirical data, when properly analyzed, are not indicative of Rhino's trading having an economically meaningful impact on Sedona's stock price.

## **B. Regression analyses**

12. As noted in the Prowse-Beloreshki Report, we “performed a number of quantitative and statistical analyses in order to examine whether the trading records and other empirical

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<sup>4</sup> Other time periods are mentioned elsewhere in the Complaint.

evidence support the allegation that Rhino engaged in manipulative trading activities.”<sup>5</sup> Consistent with general practice, the Prowse-Beloreshki Report provided an overview of the results of these analyses. Subsequently, we provided both the data we relied on and all of the analyses we performed in the preparation of the Prowse-Beloreshki Report to plaintiff.

13. The Glosten-Jones Report’s critiques of these analyses fail because they rely on inappropriate statistical techniques and are based on misreading and an incomplete understanding of the Prowse-Beloreshki Report analyses.

14. For example, the Glosten-Jones Report’s critiques of the Prowse-Beloreshki Report’s use of “a variety of flags” are ill-founded, and for a number of reasons.

15. First, the use of such “flag” or “indicator” variables is done in the Glosten and Harris article on which the Glosten-Jones Report bases its Price-Impact Model (“Glosten-Harris article”),<sup>6</sup> a fact corroborated by the reliance on such variables in the regression analyses performed by Dr. Glosten and Dr. Jones<sup>7</sup> in this matter and by senior economists at NERA in similar matters.

16. Second, the use of such variables is consistent with the potential importance (and signaling effect) of the presence in the marketplace of an informed market participant (Rhino) with substantial holdings in a particular instrument (Sedona stock).<sup>8</sup>

17. Third, the use of non-market transactions (e.g., transfer and principal transactions) in our regression analyses (to the extent that these are reflected in certain of the regression variables) is justified given that these transactions incorporate information that is relevant to market participants. This is particularly relevant given the fact that the size of these transactions generally exceeds – and generally by a significant factor – the size of typical market transactions.

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<sup>5</sup> Prowse-Beloreshki Report, paragraph 51.

<sup>6</sup> Glosten, Lawrence R. and Lawrence E. Harris, “Estimating the Components of the Bid/Ask Spread,” *Journal of Financial Economics*, 1988, vol. 21.

<sup>7</sup> See Glosten-Jones Report, ¶62 and Exhibit 9.

<sup>8</sup> Trader identity can be an important source of information for market participants. (See Madhavan A., “Market Microstructure: A Survey,” *Journal of Financial Markets* 3 (2000) 205-258, p. 236).

18. The Glostén-Jones Report's critique of the fourth regression presented in the Prowse-Beloreshki Report is based on a misreading of our report. The Glostén-Jones Report's assertion that our measure of net trades in this regression includes non-market transactions is incorrect. Furthermore, the Glostén-Jones Report's assertion that this regression does not incorporate a variable based on the "net number of shares"<sup>9</sup> transacted by Rhino is inaccurate as well. In fact, that regression is performed on the basis of explanatory variables, which incorporate the impact of the marketplace (proxied by NASDAQ), the net number of Sedona shares traded by Rhino, and the liquidity of the marketplace.

19. Finally, the Glostén-Jones Report discusses two of the regression analyses (those incorporating net shares transacted as an explanatory variable (the "Net Shares Regressions")) that were performed during the course of our work on the Prowse-Beloreshki Report and provided to plaintiff in our work papers. In particular, the Glostén-Jones Report asserts that in these regressions, "the coefficient on Badian net trading is significant." That assertion is incorrect, as are all the inferences and conclusions that are based on it, for a number of reasons.

20. First, the statistical analyses performed in the Prowse-Beloreshki Report rely on – and are presented within – the framework of multiple statistical tests. Put simply, the Prowse-Beloreshki Report's analyses involve a set of instantaneous statistical inferences, and as a result, rely on a Bonferroni adjustment, and interpret the coefficients associated with the Rhino trading accordingly.

21. The Bonferroni correction is recognized in statistics<sup>10</sup> in general as well as in the areas of litigation<sup>11</sup> and securities litigation<sup>12</sup> in particular.

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<sup>9</sup> See Glostén-Jones Report, paragraph 49.

<sup>10</sup> See Abdi, Herve, "The Bonferonni and Šidák Corrections for Multiple Comparisons," *Encyclopedia of Measurement and Statistics*, Ed. Neil Salkind, Sage: Thousand Oaks, CA, 2007.

<sup>11</sup> See "Reference Guide on Statistics," *Reference Manual on Scientific Evidence*, 2<sup>nd</sup> edition (2000) published by the Federal Judicial Center. This publication is circulated to every federal judge in the United States.

<sup>12</sup> See Tabak, David, "Multiple Comparisons and the Known or Potential Error Rate," *Journal of Forensic Economics*, March 2007. David Tabak is a senior economist with the Securities practice of NERA Economic Consulting.



22. The Bonferroni correction is a multiple-comparison correction commonly used in situations when several statistical tests are performed simultaneously.

23. Without the intellectual check and discipline imposed by the Bonferroni correction, the performance of numerous test runs results in an increased likelihood that one of these would yield a “significant” finding even when no significant effect exists. Put differently, the need to apply such a correction derives from the fact that “[r]epeated testing complicates the interpretation of significance levels.” In particular, “[i]f enough comparisons are made, random error almost guarantees that some yield ‘significant’ findings, even when there is no real effect.”<sup>13</sup>

24. The Glostén-Jones Report fails to acknowledge that fact. As a result, it fails to consider and apply the proper and requisite measures upon which the statistical significance (or lack thereof) is to be determined, and arrives at incorrect inferences.

25. In fact, based on the empirical data, none of the regression analyses performed by us (and provided to opposing counsel) contain coefficients associated with the Rhino trading in Sedona stock that are statistically significant.

26. In the course of preparing the Prowse-Beloreshki Report, we ran nine regression specifications on each of two different time periods. We included these in the work papers provided to plaintiff. Exhibit 2 presents the results of all 18 of those regressions. Taking into account the number of specifications run, none of these regressions produced results that are statistically significant with respect to Rhino’s transactions.<sup>14</sup>

*Exhibit 2. List of All Results of Prowse-Beloreshki Regression Analyses*<sup>15</sup>

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<sup>13</sup> See “Reference Guide on Statistics,” *Reference Manual on Scientific Evidence*, 2<sup>nd</sup> edition (2000) published by the Federal Judicial Center, p. 127.

<sup>14</sup> This approach is conservative in that it does not take into consideration all the additional parametric and non-parametric statistical tests performed in the Prowse-Beloreshki Report.

<sup>15</sup> The results presented in Exhibit 2 are after making certain updates to the database of Rhino’s transactions. These are described in the next section.

27. Second, the Glosten-Jones Report fails to consider – even within its flawed framework which fails to apply an appropriate Bonferroni correction – the spuriousness of the statistical significance it asserts with respect to the Net Shares Regressions.

28. The inference of statistical significance – even within the incorrect framework relied upon by the Glosten-Jones Report – is dependent upon the improper inclusion in the regression analyses of a single influential (outlier) observation.<sup>16</sup> In other words, the coefficient on Rhino net trading, once the outlier Rhino transaction executed on March 30, 2001 is excluded from the regression analyses,<sup>17</sup> is not statistically significant.

29. In addition, Drs. Glosten and Jones performed (but did not include in their report) four regressions that are similar in structure to the regressions included in the Prowse-Beloreshki Report.<sup>18</sup> These regressions appear to be testing the impact of Pond's trading in March 2001 on Sedona's stock price. This appears to be the time period that Drs. Glosten and Jones deem appropriate to examine for alleged market manipulation and Pond appears to be the entity whose trades they deem important to focus on in this matter. However, none of the four regressions found Pond's trading to have a statistically significant impact. Put differently, these regression analyses show that the coefficient on Rhino's trading is not statistically significant.

30. In sum, the Glosten-Jones Report assertions related to the reliability of the statistical analyses presented in the Prowse-Beloreshki Report are not supported by the empirical evidence.

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<sup>16</sup> Such observations tend to have unusual value as explanatory variables, and may have substantial influence on a regression's estimates. Therefore, the proper identification and careful consideration of influential (outlier) observations is of particular importance for the proper specification of regression analyses. (See, for example, Kennedy, Peter, *A Guide to Econometrics*, Fourth Edition, The MIT Press: Cambridge, MA, 1998, Chapter 19.)

We note that the effect occurs when the regressions are run over other time frames as well, including March 2001 and March – April 2001.

<sup>17</sup> This is also demonstrated by the results of the various regression analyses performed by plaintiff's experts but not presented in the Glosten-Jones Report. (See Microsoft Excel file "SDNA\_prices.xls.")

<sup>18</sup> The four regressions use Sedona's stock price return – calculated from the day's opening price to the day's closing price – as the dependent variable. Two of the regressions use the number of shares traded by Pond each day as independent variables, one of which also includes the daily returns on a NASDAQ tracking stock (QQQQ). The other two regressions use Pond's trading as a percentage of the daily volume, one of which again uses the NASDAQ returns as well. (See the Microsoft Excel file "SDNA\_prices.xls.")

31. In contrast, the results reported in the Prowse-Beloreshki Report are consistent with the empirical data and the analyses performed by us in the course of our work on that report. Therefore, our conclusions remain unchanged.

### **C. Dataset**

32. The database of Rhino's transactions in Sedona stock used in the analyses presented in the Prowse-Beloreshki Report (the "NERA Database") was created several years ago under Mr. Beloreshki's supervision while he was employed at NERA.

33. The NERA database was constructed by using account statements for various accounts that were held by Rhino or related entities.<sup>19</sup> Below is a list of the accounts:

- Canaccord Capital account for BNC Bach International SA;
- Dundee Securities Corporation account for BNC Bach International Ltd.;
- Rampart Securities, Inc. account for BNC Bach International Ltd.;
- Refco Capital Markets, Ltd. account for Amro International SA;
- Westminster Securities Corporation account for Amro International SA;
- Westminster Securities Corporation account for Cambois Finance Inc.; and
- Westminster Securities Corporation account for Roseworth Group Ltd.

34. In the course of assembling the NERA database, particular care was taken to ensure that balances in each account reconciled and that the transaction dates and amounts of each transaction were correct. That work was performed under Mr. Beloreshki's direct supervision and in accordance with NERA's general practice at the time, which required that such work be performed independently by at least two different researchers so that the results could be cross-checked and the likelihood of error be minimized.<sup>20</sup>

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<sup>19</sup> Mr. Beloreshki does not recall receiving or using an electronic database of trading data provided by counsel at DLA Piper.

<sup>20</sup> These procedures were put in place and implemented during the time when Dr. Frederick C. Dunbar was a senior member (or headed) the Securities practice at NERA.

35. In the course of preparing this rebuttal expert report, we re-confirmed the accuracy of the NERA database against Rhino account statements.<sup>21</sup>

36. As a result of this validation procedure, we made two updates to the NERA database (see Exhibit 3) which includes a total of 498 transactions.

*Exhibit 3. Updates Made to Transactions Database*

37. We re-ran all of the analyses presented in the Prowse-Beloreshki Report based on the updated database, and observed no changes to the levels of statistical significance found in the Prowse-Beloreshki Report. As a result, none of our conclusions have changed.<sup>22</sup>

38. An additional criticism made in the Glosen-Jones Report of our analyses relates to Exhibit 12 of the Prowse-Beloreshki Report (“PB Exhibit 12”). The Glosen-Jones Report notes 12 observations on PB Exhibit 12 that show Rhino’s share trading volume exceeding the market’s volume on the same day. The Glosen-Jones Report assumes that these observations are due to an error on our part whereby shares received via conversion are treated as purchases. This is incorrect. The figures on the chart represent Rhino’s total trading volume. That is, the figures add together (not net) Rhino’s purchase and sale volume. This is because Rhino could be selling to and purchasing from different parties on the same day, making each share traded unique. In any case, we re-ran the regression shown in PB Exhibit 12 and excluded the 11 observations with proportions over 100%. The result is still statistically insignificant. See Exhibit 4.

*Exhibit 4. Statistical Analysis of Rhino’s Trading Volume and Sedona Stock Price Returns (Excluding Figures Over 100%)*

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<sup>21</sup> These include account statements from Canaccord Capital (BNC Bach account) for July – August 2000, October 2000 – December 2001, and March – May 2002; Dundee (BNC Bach account) for September – November 2000, January – April 2001, and October – December 2001; Rampart (BNC Bach account) for June – November 2000; Refco (Amro account) for October 2000 – May 2001; Westminster (Amro account) for July 1 – July 28, 2000, October 28, 2000 – August 31, 2001, and January 26 – June 28, 2002; Westminster (Cambois account) for September 30 – December 29, 2000; and Westminster (Roseworth account) for July 29 – November 24, 2000.

<sup>22</sup> See Exhibit 2.

### **III. THE GLOSTEN-JONES REPORT'S ANALYSES AND CONCLUSIONS RELATED TO THE EFFECT OF RHINO'S TRANSACTIONS ON THE PERFORMANCE OF SEDONA STOCK ARE FUNDAMENTALLY FLAWED AND CANNOT BE RELIED UPON**

39. The analyses in the Glosten-Jones Report suffer from a number of fundamental flaws. As a result, these analyses cannot be relied upon.

#### **A. Study Design**

##### **1. Failure to Test for Causation: Co-Mingling of Rhino and Non-Rhino Trades**

40. The Glosten-Jones Report fails to address the central question in this matter – the effect of Rhino's trades on Sedona's stock price.

41. The methodology used by the Glosten-Jones Report estimates the impact of *all* trades – regardless of whether these were executed by Rhino or other market participants – on Sedona stock price. Drs. Glosten and Jones then attribute –without any justification and, as it turns out, erroneously – that effect to Rhino's transactions.

42. This approach relies on the assumption of commonality between Rhino and non-Rhino transactions, i.e., that both Rhino and non-Rhino transactions come from the same underlying population. This assumption, however, is not consistent with the data, which show that Rhino's trading differs from that of the rest of the market.

43. The data show that Rhino's sales tended to be executed more often on the offer side and less often on the bid side (as compared to the transactions executed by non-Rhino market participants). Put differently, Rhino's sales were more often "buyer-initiated" and less often "seller-initiated." Indeed, the difference between Rhino's transactions and those executed by other market participants is statistically significant. (An implication of this result is that, within the framework of the Glosten-Jones Report,<sup>23</sup> Rhino was less likely to be involved in a

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<sup>23</sup> A significant deficiency in the methodology used in the Glosten-Jones Report is its failure to properly identify and interpret potentially manipulative activity.

(continued...)

manipulative strategy than the rest of market participants in the marketplace for Sedona stock.) See Exhibit 5.

*Exhibit 5. Statistical Test of Difference Between Rhino Transactions and Those of Other Market Participants*

## 2. Reliance on intra-day data lacks economic justification

44. The Glosten-Jones Report uses FINRA Audit Trail Reports (“FATR”) data for Sedona stock in March 2001 as the input into its Model. The data represent individual transactions throughout the trading day and provide information about each transaction including the trade’s time, price, number of shares and the two parties involved.

45. By using these data, the Glosten-Jones Report’s analyses are attempting to test for price movements during the trading day from individual trades. The question at issue, however, is not whether or not Sedona’s price was moved at any particular point in the trading day. Rhino’s conversions of Sedona’s stock were dependent on an average price over five trading days. In addition, the analyses of intra-day data presented in the Glosten-Jones Report fail to capture the available data on the price movements in the Sedona stock price outside of the regular trading hours. As a result, these analyses do not yield the relevant information about overall price movements during the five-day period at issue.

46. In addition, the Glosten-Jones Report’s use of intra-day data is premised on the idea of extreme market efficiency, i.e., on the idea that the marketplace incorporates new information virtually instantaneously. This assumption may be justifiable in the context of the data analyzed in the Glosten-Harris article, which reflect stocks trading on the NYSE.<sup>24</sup> However, in the

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(...continued)

The Glosten-Jones Report considers sale transactions executed on the bid side as “seller initiated” and transactions executed on the offer side as “buyer initiated,” (paragraph 59) and postulates – incorrectly so and without providing a basis – that the former may be associated with manipulative activity while the latter may not (paragraph 56).

<sup>24</sup> Glosten, Lawrence R. and Lawrence E. Harris, “Estimating the Components of the Bid/Ask Spread,” *Journal of Financial Economics*, 1988, vol. 21.

context of this matter, this assumption lacks proper basis,<sup>25</sup> particularly in view of the reality of the marketplace for Sedona stock, which is marked by relatively low liquidity and trading volumes.

47. Finally, the Glostten-Jones Report's reliance on intra-day data comes also at the expense of improperly ignoring any market and industry factors – an approach that ignores the substantial decline in relevant market and industry indices during March 2001 (-14.5% and -17.0% for the Nasdaq Composite Index and an index of Sedona's peers, respectively).

### 3. Time frame

48. The Glostten-Jones Report criticized the Prowse-Beloreshki Report for presenting analyses using a period from June 2000 through June 2002 and March through May 2001. As discussed above, these are both valid selections of time periods. We note that both the Complaint filed in this matter by the SEC and the Glostten-Jones Report present multiple time periods as being relevant.

49. The Complaint in this matter filed by the SEC mentions several different time periods in the context of discussing the alleged manipulation. One of those time periods is "early March 2001."<sup>26</sup> Another is "March 1, 2001 through March 29, 2001."<sup>27</sup> Another time period mentioned is in the context of measuring Sedona's stock price decline from the average "[b]etween January 26 and March 1, 2001" and March 23, 2001.<sup>28</sup> Simply "March 2001" is another time frame referred to in the Complaint.<sup>29</sup> In addition to these time frames, the Complaint also repeatedly refers to a relevant period of "at least March 2001 through May 2001."<sup>30</sup>

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<sup>25</sup> The issue of market efficiency, and the various ways to establish the presence of lack thereof, is the subject of numerous publications of senior economists at NERA, including Dr. Frederick C. Dunbar. See, for example, Dunbar, F., David Tabak and Paul Ferrillo, "The 'Less Than' Efficient Capital Markets Hypothesis: Requiring More Proof from Plaintiffs In Fraud-On-The-Market Cases," *St. John's Law Journal*, Winter 2004, vol. 78, no. 1, 81-129.

<sup>26</sup> Complaint, paragraph 27.

<sup>27</sup> Complaint, paragraph 29.

<sup>28</sup> Complaint, paragraph 30.

<sup>29</sup> Complaint, paragraph 2.

<sup>30</sup> Complaint, paragraphs 45, 49, 53, 54, 57, 58, and 61.

50. The Glosten-Jones Report also mentions several different time periods. It uses March 2001 and March 1 through March 29, 2001 several times, but also “focus[es] on March and April of 2001, the time period around the conversions.”<sup>31</sup> It also uses a period beginning on March 9, 2001,<sup>32</sup> and states that “the greatest incentives for manipulation are present beginning around March 15, 2001.”<sup>33</sup> It also appears to assert that Rhino’s behavior changed beginning on March 15, 2001, implying that the assumed manipulative behavior did not start until then.

51. The Price-Impact Model used in the Glosten-Jones Report relies on the FATR over the month of March 2001. Similarly, the results of the Model are applied to Pond and/or Refco trades during March 2001 to assess their impact. By using March 2001, the Glosten-Jones Report is using half of its dataset from March 1 through 14, the period before “the greatest incentives for manipulation” were present, and which Drs. Glosten and Jones assert as a period when Rhino’s behavior was different from its behavior in the last half of March. It also ignores April 2001, which is the month in which the most conversions (in terms of number and dollar amounts) occurred.

52. The Glosten-Jones Report appears to attempt to justify its use of only the March 2001 time period by stating “[c]learly, after conversion, Amro would like a higher price for Sedona as the inventory of over 800,000 shares is sold off, so it does not have any incentive to manipulate the price downward then, and in fact has an incentive to make the price increase.”<sup>34</sup> As well as being inaccurate, that statement is also not a reasonable justification for using only the March time period.

53. First, Rhino converted shares from the 5% Convertible Debentures on eight occasions, the first of which was in March 2001. Rhino converted shares three times in April 2001, twice in May 2001, once in June 2001, and once in February 2002. Limiting the analysis to only March 2001 ignores most of these conversions.

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<sup>31</sup> Glosten-Jones Report, paragraph 57.

<sup>32</sup> Glosten-Jones Report, paragraph 54 and Exhibit 7.

<sup>33</sup> Glosten-Jones Report, paragraph 53.

<sup>34</sup> Glosten-Jones Report, paragraph 31.



54. In fact, Rhino converted only \$100,000 of shares in March 2001, with an additional \$1,000,000 in April and \$500,000 in May. The March conversion was a very small portion (less than 4.5%) of the total conversions of \$2,230,000 shares. The table below shows the dates and amounts of each conversion.

<b>Date</b>	<b>Dollar Amount Converted</b>	<b>Number of Shares Received</b>	<b>Percentage of Total Dollar Amount Converted</b>
3/27/2001	\$100,000	127,517	4.48%
4/5/2001	\$250,000	395,337	11.21%
4/10/2001	\$500,000	761,342	22.42%
4/16/2001	\$250,000	328,524	11.21%
5/1/2001	\$200,000	261,587	8.97%
5/15/2001	\$300,000	303,399	13.45%
6/20/2001	\$230,000	320,695	10.31%
2/25/2002	\$400,000	679,925	17.94%
<b>Total</b>	<b>\$2,230,000</b>	<b>3,178,326</b>	<b>100.00%</b>

55. Second, the reference to a long position of “over 800,000 shares” in the Glosten-Jones Report indicates that it is actually referring to the number of shares it assumes Rhino had after the first four conversions – that is, after the April 16 conversion was complete – rather than simply at the end of March, where the Glosten-Jones Report ends its analysis.<sup>35</sup>

#### **4. Model Specification**

56. The specification of the Price-Impact Model as used in the Glosten-Jones Report suffers from various deficiencies.

57. First, the Glosten-Jones Report postulates – without the generally accepted formal statistical testing – a regime switch in the middle of March 2001. This is implied by the statements “Badian’s trading strategy changed from the early part of March to the latter half of

<sup>35</sup> As discussed earlier, this assertion is in any case incorrect; Rhino’s long equity position never reached even 60,000 shares in this period.

March,”<sup>36</sup> and “the greatest incentives for manipulation are present beginning around March 15, 2001.”<sup>37</sup>

58. The suggestion of a “regime switch” in the middle of March 2001 is inconsistent with the methodology used in the Glosten-Jones Report. Indeed, the specification of a single regression model spanning a period in which, as asserted by Drs. Glosten and Jones, there are different trading strategies being employed by Rhino, is improper and, as a result, the analyses and conclusions of such a flawed methodology are unreliable.

59. Alternatively, if there was in fact no “regime switch” (and the Glosten-Jones Report presents no statistical test of whether there was one or not) then the conclusions they reach based on the assumption of such a regime switch are rendered unreliable.

60. Thus, regardless whether there was or was not a regime switch around March 15, 2001, the conclusions presented in the Glosten-Jones Report are rendered unreliable.

61. Second, a key assumption of the Price-Impact Model relied on by the Glosten-Jones Report - that all price effects can be attributed solely to the trading behavior of market participants,<sup>38</sup> and, as a result, any market, industry, and company-specific effects can be ignored - is inconsistent with the facts and economics of this matter.

62. In particular, the Glosten-Jones Report fails to take into consideration that in March 2001 there were a number of events that generated new information about Sedona. The first is the impact of the substantial declines in market and industry factors, something of particular importance given the substantial decline in the Nasdaq Composite Index (14.5%) and an index of Sedona’s peers (17.0%) during March 2001. The second is the failure by Sedona to repay the 5% Convertible Debentures by March 22, 2001, thus triggering the first potential conversion date.

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<sup>36</sup> Glosten-Jones Report, paragraph 58.

<sup>37</sup> Glosten-Jones Report, paragraph 53.

<sup>38</sup> Dr. Glosten observes that “[t]he model and estimation procedures...assume that neither spread component changes through time. In reality this is unlikely, especially near events that generate new information.” See Glosten, Lawrence R. and Lawrence E. Harris, “Estimating the Components of the Bid/Ask Spread,” *Journal of Financial Economics*, 1988, vol. 21, p. 141.

The third event that the Glosten-Jones Report fails to consider is that there was the actual conversion initiated on March 27, 2001.

63. Third, the Glosten-Jones Report ignores available data and fails to establish a robust time framework. In particular, the Glosten-Jones Report leaves out potentially relevant market and transaction data (such as any data outside of the period analyzed by plaintiff's experts). The Glosten-Jones Report attempts to justify this approach by pointing out that "[t]he greatest motive for downward manipulation occurs on the five trading days during which the conversion price is determined."<sup>39</sup>

64. However, plaintiff's experts analyze a time frame that is inconsistent with their opinion related to the particular importance of conversion periods. Indeed, the period analyzed in the Glosten-Jones Report includes numerous trading days that fall outside such conversion periods.

65. Furthermore, the Glosten-Jones Report's focus on the importance of look-back conversion periods is inconsistent with plaintiff's experts' choice to exclude from any analyses seven of the eight such look-back conversion periods.

66. Furthermore, the Glosten-Jones Report's focus on analyzing the periods of time providing "the greatest motive for downward manipulation"<sup>40</sup> is contradicted by plaintiff's experts' decision to focus on the look-back period associated with the smallest conversion amount.

## **B. Methodology and Data Used in Glosten-Jones Report**

### **a. The data used in the Glosten-Jones Report are not suitable for the Price-Impact Model**

67. The FATR data used in the Price-Impact Model violate the independence assumption built into the Model. Furthermore, the data are such that the price changes and another key variable in the Model, the "Q" value, may be assigned incorrect values.

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<sup>39</sup> Glosten-Jones Report, paragraph 53.

<sup>40</sup> Glosten-Jones Report, paragraph 53.

**(1) The data used in the Glosten-Jones Report violate the Price-Impact Model's independence assumption**

68. An assumption made in the Price-Impact Model is that each trade is independent. The Glosten-Harris article in which the Price-Impact Model is described mentions this as an unaddressed "limitation." The authors state:

"Although we implicitly treat every trade recorded by Fitch as independent, this occasionally is not so. A large trade may include executions of several separate limit orders at different prices. They will be recorded as separate trades but this fact is not included on the Fitch tape."<sup>41</sup>

69. In the FATR data used, situations where large trades are reported as multiple smaller trades appear to occur.

70. For example, on March 1, 2001, Refco sold 26,000 Sedona shares. According to the FATR, Refco sold 20,000 of these shares to an entity with code "SLKC" in five separate trades, and sold the remaining 6,000 shares to Pond in one trade. However, the data included in the Glosten-Jones Report's implementation of the Model represent the Refco sale of 6,000 shares to Pond as four individual trades of Pond selling the shares to Island.<sup>42</sup> This is exactly the type of "limitation" that is referred to in the Glosten-Harris article, and the Glosten-Jones Report does not discuss any adjustments made to correct for it.

**(2) The order of trades in the FATR are sometimes indeterminate**

71. The Price-Impact Model used in the Glosten-Jones Report relies on the trades in its dataset being ordered properly. As stated in the Glosten-Jones Report, "[t]he key assumption of the Price Impact Model is that if there are two trades in a row that are buyer-initiated, the price change between the two trades is an estimate of the price impact. Similarly, if there are two

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<sup>41</sup> Glosten, Lawrence R. and Lawrence E. Harris, "Estimating the Components of the Bid/Ask Spread," Journal of Financial Economics, 1988, vol. 21, p. 141.

<sup>42</sup> This is due to the fact that the Glosten-Jones Report limits its dataset to those trades that are "reported to the tape." In the example discussed here, the 6,000 sale from Refco to Pond was not reported to the tape, but the four trades from Pond to other parties were.

trades in a row that are seller-initiated, the price decrease between the two trades captures the price impact of the sell.”<sup>43</sup>

72. Because of this “key assumption,” one must be able to place the trades in order of execution before applying the Model. If two trades in a row are both buyer-initiated and one is at a price of \$1.00 and the other is at a price of \$1.01, placing them in the correct order is imperative in order to determine whether the price-impact of the trade is an increase or decrease of \$0.01.

73. In the 2,980 trades analyzed in the Glosten-Jones Report, there are 42 pairs of trades with the same execution time stamp and different prices. Changing the assumptions about the order in which these trades occurred changes the results of the regressions.

74. In fact, the Model even relies on trades that have the same time stamp and the same price to be ordered properly. The Glosten-Jones Report states that “[l]arger trades are expected to have a bigger impact than smaller trades, so the price impact is modeled as a linear function of the trading volume.”<sup>44</sup> There are an additional 128 pairs of trades in the dataset that have the same time stamp and price but different share volumes. The assumptions that the Glosten-Jones Report made about the sequence of these trades affected its results, and different assumptions will yield different results.

### **(3) Simultaneous inside quotes**

75. The Price Impact Model used by the Glosten-Jones Report assigns a value (denoted by “Q”) of -1, 1, or 0 to each trade, depending on whether its price was at (or below) the prevailing bid, at (or above) the prevailing ask, or in between, respectively. The “prevailing” bid and ask are considered to be the last reported, referred to as an “inside quote,” before the execution time of the trade, a minimum of two seconds prior to the trade.

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<sup>43</sup> Glosten-Jones Report, paragraph 60.

<sup>44</sup> Glosten-Jones Report, paragraph 60.

76. Due to uncertainties in the proper bid and ask quotes to apply, Q can take on more than one value for some trades.<sup>45</sup>

77. For 23 of the trades in the set of 2,980 used in the Glosten-Jones Report, at the time of the last quoted bid and ask there were actually two different quotes with the same time stamp. For example, there is a trade on March 6, 2001 for 400 shares with an execution time of 12:16:28. The time of the last bid and ask quote is 12:16:15, but there were actually two different inside quotes at that time. One quote has a bid of 1.4375 and an ask of 1.46875. Since the price of the actual trade was 1.4375, the Glosten-Jones Report would presumably assign this trade a Q value of -1, since the price is equal to the bid. However, there was a second inside quote at 12:16:15, for 1.375 and 1.46875. Based on this, the trade should have a Q value of 0, since the price of the trade is between the bid and the ask. For this trade, the Glosten-Jones Report appears to have used the Q value of 0,<sup>46</sup> although it is not clear which value is the correct one.

78. There are seven additional trades in the dataset for which the value of Q is indeterminate because of simultaneous bid-ask quotes.

79. In addition, there are 26 trades in the dataset for which the data show no execution time. The Glosten-Jones Report chooses to use the trade report time for these trades instead of the execution time. For the purpose of determining the prevailing inside quote at the time of the trade, the report time is an unreliable estimate. For the trades in the dataset that do have both report and execution times, the report time can occur as much as four hours after the execution time (in one instance) and at least two seconds after the execution time in 313 instances. In fact there are 111 instances in which the report time is actually before the execution time.

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<sup>45</sup> We have not been provided with a number of documents that would allow us to replicate the analyses presented in the Glosten-Jones Report. Among other, we do not have any files or documentation on the procedures followed by plaintiff's experts in determining how the 2,980 transactions used in their analyses were identified from among the 3,050 transactions in their database for March 2001, and how these were incorporated into the Glosten-Jones methodology (e.g., the determinants of the order for transactions with identical time stamp, the assumptions related to the determination of the correct bid and ask prices for inside quotes with identical time stamp).

<sup>46</sup> See Microsoft Excel file "tx\_rpt.xls" produced by plaintiff's experts.

#### (4) Trades reported to the tape

80. Another limitation arising from the use of the FATR data is the loss of information due to the fact that only one side of the transaction is “reported to the tape.” If, for example, a market maker purchases 100 shares from market participant X and sells those same 100 shares to market participant Y, the market maker, who is obligated to report the trade, reports to the tape only one side of the trade.<sup>47</sup> Both legs of the transaction appear in the FATR database, but only one is indicated to have been reported to the tape.

81. For example, in Sedona’s FATR data for March 2001, consider a transaction with execution time of 11:40:57 on March 12, 2001. The data indicate that Pond sells 2,000 shares to Island at \$1.09375 per share. This transaction, however, is not denoted as being reported to the tape. One second later, there is a trade of 2,000 shares at \$1.09375 from Island to a party “BRUT.” This trade is reported to the tape.

82. One of the first steps listed in the Glosten-Jones Report in using the FATR is to limit the dataset to those trades that are reported to the tape.<sup>48</sup> The Glosten-Jones Report is then capturing only the leg of each transaction that is in fact reported to the tape. However, since the Price-Impact Model is dependent on the exact time of each transaction, it is unclear whether this method actually includes the proper leg of the transaction for determining whether the Q value of the transaction is -1, 0, or 1. In the March 12 example, the unreported trade from Pond to Island is buyer-initiated, or a Q value of 1, based on the bid and ask at the time of the trade. The second trade from Island to BRUT has a Q value of zero. This is the value that is used in the Glosten-Jones Report’s analyses (since this is the leg reported to the tape). However, since the Pond to Island trade occurred first, presumably the proper Q value is 1.

83. The reliance on trades reported to the tape causes the data to be inappropriate for the Price-Impact Model due to another inconsistency as well. While each trade may eventually (or, “effectively”<sup>49</sup> as stated in the Glosten-Jones Report) be reported to the tape, there are a number of instances in which trades are combined with others when reported to the tape.

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<sup>47</sup> See <http://www.finra.org/Industry/Regulation/Guidance/P038942>.

<sup>48</sup> Glosten-Jones Report, paragraph 61.

<sup>49</sup> Glosten-Jones Report, paragraph 38.

84. For example, consider a trade on March 8, 2001 executed at 15:40:47 where Pond sold 1,000 shares to “NITE” at \$1.28125 per share. This trade was not reported to the tape.<sup>50</sup> The trade that was reported to the tape took place at 15:40:46 and it was NITE selling shares to “TORY” at 1.28125, but the number of shares was 2,000. This is a similar problem to the independence issue discussed above, but in this case transactions were combined before being reported to the tape. Since the Price-Impact Model depends on the size of the transactions, combining observations like this has an effect on the results of the Model. There are eleven other instances in which Pond trades were combined with other shares in the transactions that were reported.

85. Because the Price-Impact Model relies on using such specific information about the information in the market at the time of each trade, the fact that the details of the times of the trades and the bid-ask quotes is unreliable and for so many trades renders the application of the Model in the Glosten-Jones Report flawed. Furthermore, the reliance on trades reported to the tape can cause other observations used in the Model to be inaccurate in terms of timing. The number of uncertainties in the dataset makes any output from the Model arbitrary and meaningless.

## **2. The Glosten-Jones Report misclassifies Rhino’s trades**

86. The FATR provide key information about individual trades in Sedona’s stock, including the time, price, number of shares and the two parties involved. The parties listed are at the brokerage level. That is, the parties indicated are the actual firms that execute the trades, not the customers who ordered the trades from those firms for their accounts. As a result, Mr. Badian, Rhino Advisors, Amro, or any other related entities are not indicated anywhere in the data as a market participant in any trades. Rather, Rhino’s trades went through various brokerages including Refco and Westminster, who are indicated as parties to trades in the FATR.

87. The Glosten-Jones Report attempts to identify Rhino’s trades in March 2001 by assuming that any trades in that period that included Pond Equities (“Pond”), a market maker in the stock, as a party must be a trade on behalf of Rhino through Refco. The Glosten-Jones Report

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<sup>50</sup> The Glosten-Jones Report states that “all Pond sales that do not take place on Island, the trade is reported to the tape” in paragraph 37. However, there are a number of Pond trades through entities other than Island where the trade was not reported to the tape.



does not make an attempt to justify this assumption, but it appears to be because, *on some days*, the data show sales from Refco to Pond for the same number of shares shown as being sold by Pond to other parties on that day, which is also the same number of shares confirmed to be sold by Refco on behalf of Rhino in other sources.<sup>51</sup>

88. However, on other days the number of shares sold by Refco to Pond in the FATR transactions (and confirmed by other sources) is not equal to the number of shares in the FATR shown as sold by Pond to other entities on the same day. Despite the evidence to the contrary, in these instances the Glosten-Jones Report assumes that the shares shown as sold by Pond to other entities are the shares sold on Rhino's behalf. The table below shows three days on which this occurs in March 2001.<sup>52</sup>

<b>Date</b>	<b>FATR: Shares Pond Sells to Other Entities</b>	<b>FATR: Shares Refco Sells to Pond</b>	<b>Refco Amro Account Statement: Shares Sold</b>	<b>Refco Spreadsheet 4-30-01.xls: Shares Sold</b>	<b>Shares Glosten- Jones Attributes to Badian</b>
3/5/01	<b>45,636</b>	40,136	40,136	40,136	<b>45,636</b>
3/7/01	<b>27,000</b>	32,500	32,500	32,500	<b>27,000</b>
3/29/01	<b>35,800</b>	31,300	31,300	31,300	<b>35,800</b>

89. The Glosten-Jones Report notes the discrepancy on the first two dates and erroneously states that those are the only two dates where the FATR data for shares Pond sells and shares Refco sells to Pond do not match.

“On only two days, March 5 and March 8 [*sic*], does the total volume of Pond sales in the market for the day not match the total Refco-Pond volume. The March 5 Pond-Refco transaction is 5,500 shares too small, and the March 8 [*sic*] transaction is 5,500 shares too big, suggesting that there was a clerical error on March 5 that was reversed a few days later. Otherwise the total daily volumes match exactly.”<sup>53</sup>

<sup>51</sup> The Glosten-Jones Report appears to use a Microsoft Excel spreadsheet called “Refco Spreadsheet 4-30-01.xls” that lists daily Refco trades on behalf of Amro during March 2001. These figures match those contained in the Refco account statements for Amro.

<sup>52</sup> See also the Microsoft Excel file “pond\_daily\_sum.xls” produced by Drs. Glosten and Jones, which, shows a column labeled “pondrefc” which appears to be the daily sum of the daily FATR Pond transactions to other entities and a column labeled “refcowksht” that appears to contain the daily share sale figures from “Refco Spreadsheet 4-30-01.xls.” The figures are in bold-face type on these three days when they differ.

<sup>53</sup> Glosten-Jones Report, paragraph 39.

90. Despite the fact that two additional sources were in agreement with the numbers for the Pond-Refco transaction, the Glosten-Jones Report assumed that those figures were in error. This assumption is unreasonable, and contributes to the inaccuracy of the dataset used in the Glosten-Jones Report. A more reasonable possibility, not mentioned in the Glosten-Jones Report, is that Pond may have been trading on behalf of its own account.

91. The identification of the trades attributable to Rhino is key in the Glosten-Jones Report to its analyses in Exhibits 6, 8, 10, and 11 and its conclusions in paragraphs 63 through 67 about the impact of Rhino's trades on Sedona's stock price. Since the Glosten-Jones Report did not correctly identify the trades attributable to Rhino, these analyses are inaccurate and cannot be relied upon.

### **C. Use of the Glosten-Jones Model to Derive Implications for the Effect of Rhino's Trades**

92. Even aside from all the flaws in the study design, the methodology and data in the Price Impact study, there are major flaws in how Drs. Glosten and Jones interpret the results of their study.

93. The Glosten-Jones Report concludes that trading by Rhino reduced the conversion share price from \$1.1942 to the actual conversion price of \$0.9384, or a decline of \$0.2558. However, from March 19, 2001 through March 26, 2001, the price actually declined only \$0.0625, from \$1.0625 to \$1.00. After taking into account the expected movements in the stock over that period (the Nasdaq Composite Index dropped by 1.7% over that period), we calculate that the price movement of \$0.0625 over the five-day period is not statistically significant. Not only is this movement not statistically significant (that is, it is indistinguishable from zero), but the portion of the movement that is considered to be unexpected based on the market movements, is only \$0.003. See Exhibit 6.

*Exhibit 6. Calculation of Market-Adjusted Price Movement: March 20, 2001 – March 26, 2001*

94. In addition, Exhibit 10 to the Glosten-Jones Report purports to show the "Cumulative Price Impact on SDNA Share Price of March 2001 Pond and Refco Sales." It finds an estimated price impact, as of March 29, 2001, of -27.17% due to the Pond and Refco Trades. If this same analysis is performed on the trades of the rest of the market, excluding the Pond and

Refco Trades, a price impact of -58.22% is found. That is, based on the Glosten-Jones Report's analysis, the rest of the market drove the price of Sedona stock down much more than the trades by Rhino.

95. Similarly, the Glosten-Jones Report's Exhibit 11 finds that the price on March 29, 2001 would have been higher by \$0.29 but-for the trading by Rhino. By extending this same analysis to the rest of the market, we find that the price would have actually been higher by \$1.09 had it not been for the trading of the rest of the market (excluding the Pond and Refco trades). See Exhibit 7.

96. If the conclusion of the Glosten-Jones Report's analyses was that Rhino's trades manipulated the price down over the March 2001 period, than the conclusion of extending these analyses to the rest of the market appears to be that *all* of the market participants manipulated Sedona's stock price down during March 2001.

*Exhibit 7. Cumulative Impact on SDNA of March 2001 Pond Sales and Rest of Market's Sales Using Results of Glosten-Jones Report*

97. In addition, the Glosten-Jones Report provides a misleading interpretation of Exhibit 11 in its text. It states that Exhibit 11 of the Glosten-Jones Report shows the but-for price of Sedona stock "if Badian had not been shorting the stock" and that the estimate is the amount the price is lower "as a result of Badian's March sales."<sup>54</sup> In fact, Exhibit 11 does not use all of Rhino's sales in its calculation, as its title implies. It uses only those sales that took place at the bid. This information appears to be reflected only one place in the Glosten-Jones Report – in footnote 2 to Exhibit 10, which is then used as the basis for Exhibit 11.

98. This analysis as performed is, at best, incomplete. Looking at the impact of only Rhino's trades at the bid leaves out half the story. The trades attributed to Rhino also include sales at the ask price, and the results of the Price-Impact Model in the Glosten-Jones Report must be applied to these as well in order to determine the actual effect of Rhino's sales. By selectively performing the analysis only on some of Rhino's sales, the Glosten-Jones Report presents a biased result.

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<sup>54</sup> Glosten-Jones Report, paragraph 65 (also see paragraph 66 for similar language).

99. As shown on Exhibit 6 to the Glosten-Jones Report, there were actually more Pond and Refco shares sold at the ask price (457,636 shares) than at the bid price (382,900 shares). By replicating the analysis in the Glosten-Jones Report's Exhibit 11 but including all Pond and Refco sales, we find that the "Share Price without Pond Sales" is actually lower than the actual share price as of March 29, 2001. See Exhibit 8.

*Exhibit 8. Cumulative Impact on SDNA of March 2001 Pond Sales Using Results of Glosten-Jones Report*

#### **D. Analyses of "wash sales"**

100. The Glosten-Jones Report purports to analyze what it refers to as "wash sales" between Rhino accounts occurring on April 12, 16, 17, and 18 of 2001.<sup>55</sup> The Glosten-Jones Report asserts that Rhino had an incentive to manipulate the price upward in mid-April after the first four conversions because 820,000 shares still had to be sold on the open market at this point. This reasoning is incorrect for several reasons.

101. First, April 12, 2001 was included in the pricing period for Rhino's April 16 conversion. The Glosten-Jones Report does not explain why Rhino would have an incentive to desire a higher price for Sedona stock on April 12, 2001. In fact, such an incentive would be inconsistent with the Glosten-Jones Report analyses and the theory of manipulation alleged in the SEC's Complaint.

102. Second, the statement that Rhino had a long position of 820,000 shares to sell after the conversions is inaccurate. In fact, Rhino's long position never reached even 60,000 shares in this period. As of April 12, 2001, Rhino was short over 700,000 shares. On April 16, 2001, Rhino received the shares from the third (April 10) conversion. At the end of the day, Rhino had a long position of 43,320 shares. This was its first long position since receiving conversion shares. Rhino continued to sell shares and did not have a long position again until April 19, when it received shares from the fourth (April 16) conversion and ended the day with a long position of 59,344 shares. Rhino continued to be a net seller over the next several days and again had a short position by April 24.

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<sup>55</sup> Although the SEC alleges that April 19 is included in the list of days on which "wash sales" occurred, the Glosten-Jones Report does not include this date in its analysis. See The SEC's First Supplemental Responses and Objections to Defendant Badian's Second Set of Interrogatories.

103. Third, on each of the four days that the Glosten-Jones Report alleges “wash sales,” Rhino was actually a net seller of Sedona stock. Over the four trading days April 12, 16, 17 and 18, Rhino actually sold 254,500 more shares than it purchased. This behavior is not consistent with manipulating the price upward.

104. Due to the Glosten-Jones Report’s failure to consider all of the available information about Rhino’s trades, its conclusions about the trades in mid-April are incorrect.

#### IV. MISCELLANEOUS

105. Our work is ongoing and our opinions are subject to revision based on new information (including reports or testimony by plaintiff's experts), which subsequently may be provided to, or obtained by us. In particular, we may present analysis for additional periods of Rhino's trading, if requested. In addition, we may present demonstratives at trial based on the analysis we have performed.

Respectfully submitted,



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Stephen D. Prowse



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Tsvetan N. Beloreshki

## **Exhibit 1**

### **Documents Reviewed in Preparation of the Sur-Rebuttal Report**

- Documents identified in Exhibit 3 to the Prowse-Beloreshki Report

#### **Case-Related**

- Account statements for Canaccord Capital (BNC Bach International SA account), Dundee Securities Corporation (BNC Bach International Ltd account), Rampart Securities, Inc. (BNC Bach International Ltd. account), Refco Capital Markets, Ltd. (Amro International SA account), and Westminster Securities Corporation (Amro International SA, Cambois Finance Inc., and Roseworth Group Ltd. accounts) with the following Bates ranges:
  - GOJO 000002-42
  - GOJO 000715-736
  - GOJO 000780-795
  - GOJO 000832-839
  - GOJO 853-859
  - RA 001963-2245
  - RA 001894-1936
  - R 000337-340
  - R 000355-367
  - R 000545-593
  - R 000659-690
  - R 001341-1356
  - R 001421-1441
  - R 001521-1539
  - R 001675-1688
  - R 001787-1804
  - R 002305-2324
  - R 002360-2377
  - R 002427-2444
  - R 002465-2487
  - R 002535-2549
  - R 002577-2592
  - R 002614
  - R 002638-2655
  - R 002656-2658
  - R 002684-2700
  - R 002702-2704
  - R 002706-2718
  - R 002720
  - R 002805-2807
  - R 002809-2815

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- R 002821-2829
  - R 002831-2833
  - R 002835-2858
  - R 002899-2901
  - R 002903-2913
  - R 003629-3641
  - R 003558-3564
  - R 003703-3706
  - R 003709-3732
  - R 003735-3753
  - R 003755-3760
  - R 003773-3778
  - R 003831-3841
- Conversion notice dated March 27, 2001
  - Conversion notice dated April 5, 2001
  - Conversion notice dated April 10, 2001
  - Conversion notice dated April 16, 2001
  - Conversion notice dated May 1, 2001
  - Conversion notice dated May 15, 2001
  - Conversion notice dated June 20, 2001
  - Conversion notice dated February 25, 2002
  - Two Expert Reports in this matter by Lawrence R. Glosten, Ph.D. and Charles M. Jones, Ph.D dated February 10, 2010
  - Files produced by Plaintiffs' experts Drs. Glosten and Jones

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**Exhibit 2A**  
**List of All Results of Prowse-Beloreshki Regression Analyses**  
**June 26, 2000 - June 14, 2002**

	Intercept	Nasdaq Return	Any Rhino Transaction or Transfer (Buy, Sell, "Principal")	Any Rhino Trading (Buy or Sell)	Rhino Purchases	Rhino Sales	Rhino "Transfer"	Rhino "Principal"	Net Daily Shares Transacted (Buy or Sell) As a % of Trading Volume	Net Daily Shares Transacted or Transferred (Buy, Sell, "Transfer," or "Principal") As a % of Trading Volume	Net Daily Shares Transacted (Buy or Sell)	Net Daily Shares Transacted or Transferred (Buy, Sell, "Transfer," or "Principal")
<b>Regression 1</b>												
Coefficients	0.00	0.40		0.00								
p-value <sup>1</sup>	0.44	0.01		0.76								
<b>Regression 2</b>												
Coefficients	-0.01	0.39			0.01	0.00						
p-value <sup>1</sup>	0.34	0.01			0.35	0.84						
<b>Regression 3</b>												
Coefficients	-0.01	0.39			0.01	0.00	0.02	0.02				
p-value <sup>1</sup>	0.34	0.01			0.42	0.95	0.56	0.40				
<b>Regression 4</b>												
Coefficients	0.00	0.40							0.03			
p-value <sup>1</sup>	0.81	0.01							0.36			
<b>Regression 5</b>												
Coefficients	-0.01	0.40	0.00									
p-value <sup>1</sup>	0.34	0.01	0.58									
<b>Regression 6</b>												
Coefficients	0.00	0.40								0.00		
p-value <sup>1</sup>	0.41	0.01								0.98		
<b>Regression 7</b>												
Coefficients	0.00	0.40										0.00
p-value <sup>1</sup>	0.41	0.01										0.95
<b>Regression 8</b>												
Coefficients	-0.01	0.40									0.00	
p-value <sup>1</sup>	0.18	0.01									0.16	
<b>Regression 9</b>												
Coefficients	-0.01										0.00	
p-value <sup>1</sup>	0.12										0.15	

**Notes and Sources:**

Regressions 1 through 4 are the same specifications presented in Exhibit 13A to the Prowse-Beloreshki Report.

All results reflect regressions run on the updated dataset as discussed in the text of this report.

<sup>1</sup> No results are statistically significant at the 99% or 95% level.

The critical p-values for 99% and 95% levels given 9 different regressions are 0.00111 and 0.00556, respectively.

The critical p-values for 99% and 95% levels given 18 different regressions are 0.00056 and 0.00278, respectively.

**Exhibit 2B**  
**List of All Results of Prowse-Beloreshki Regression Analyses**  
**March 1, 2001 - May 31, 2001**

	Intercept	Nasdaq Return	Any Rhino Transaction or Transfer (Buy, Sell, "Principal")	Any Rhino Trading (Buy or Sell)	Rhino Purchases	Rhino Sales	Rhino "Transfer"	Rhino "Principal"	Net Daily Shares Transacted (Buy or Sell) As a % of Trading Volume	Net Daily Shares Transacted or Transferred (Buy, Sell, "Transfer," or "Principal") As a % of Trading Volume	Net Daily Shares Transacted (Buy or Sell)	Net Daily Shares Transacted or Transferred (Buy, Sell, "Transfer," or "Principal")
<b>Regression 1</b>												
Coefficients	0.03	0.52		-0.03								
p-value <sup>1</sup>	0.46	0.14		0.41								
<b>Regression 2</b>												
Coefficients	0.03	0.52			0.01	-0.04						
p-value <sup>1</sup>	0.47	0.15			0.57	0.35						
<b>Regression 3</b>												
Coefficients	0.02	0.46			0.01	-0.03	0.01	0.03				
p-value <sup>1</sup>	0.56	0.20			0.67	0.38	0.89	0.42				
<b>Regression 4</b>												
Coefficients	0.02	0.47							0.15			
p-value <sup>1</sup>	0.19	0.18							0.07			
<b>Regression 5</b>												
Coefficients	0.00	0.52	0.00									
p-value <sup>1</sup>	0.96	0.14	0.99									
<b>Regression 6</b>												
Coefficients	0.00	0.50								0.01		
p-value <sup>1</sup>	0.88	0.16								0.74		
<b>Regression 7</b>												
Coefficients	0.00	0.48										0.00
p-value <sup>1</sup>	0.88	0.17										0.28
<b>Regression 8</b>												
Coefficients	0.02	0.55									0.00	
p-value <sup>1</sup>	0.16	0.10									0.01	
<b>Regression 9</b>												
Coefficients	0.02										0.00	
p-value <sup>1</sup>	0.18										0.01	

**Notes and Sources:**

Regressions 1 through 4 are the same specifications presented in Exhibit 13B to the Prowse-Beloreshki Report. All results reflect regressions run on the updated dataset as discussed in the text of this report.

<sup>1</sup> No results are statistically significant at the 99% or 95% level.

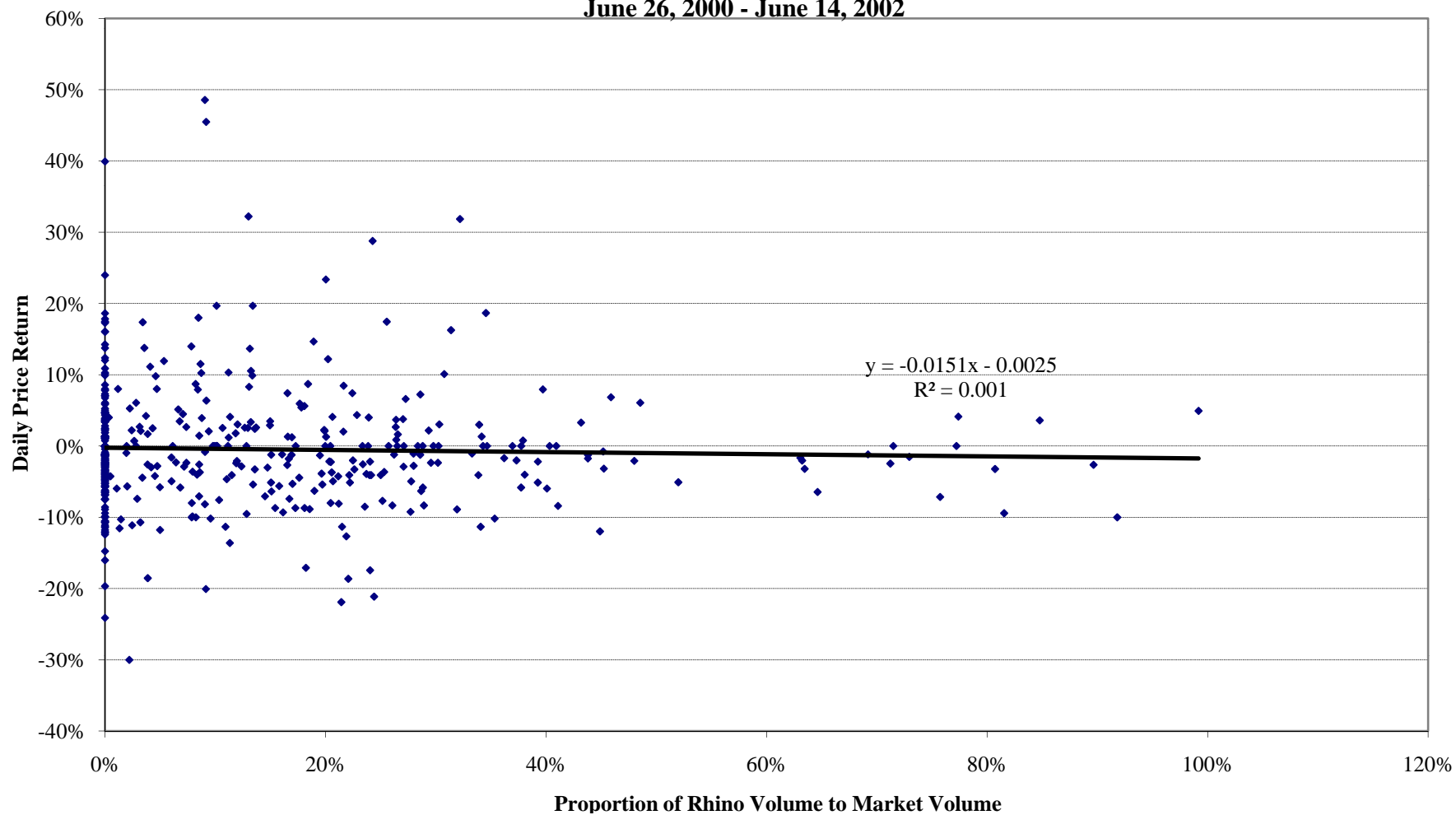
The critical p-values for 99% and 95% levels given 9 different regressions are 0.00111 and 0.00556, respectively.

The critical p-values for 99% and 95% levels given 18 different regressions are 0.00056 and 0.00278, respectively.

**Exhibit 3**  
**Updates Made to Transactions Database**

<b>Account</b>	<b>Shares</b>	<b>Transaction Type</b>	<b>Original Date</b>	<b>New Date</b>	<b>Reason</b>
Westminster – Amro	153,856	Principal	4/30/2001	4/30/2002	account statement shows this transaction occurring on 4/30/02
Westminster – Amro	11,000	Sale	3/27/2002	3/26/2002	account statement shows this transaction occurring on 3/26/02

**Exhibit 4**  
**Statistical Analysis of Rhino's Trading Volume and Sedona Stock Price Returns**  
**(Excluding Figures over 100%)**  
**June 26, 2000 - June 14, 2002**



**Exhibit 5**  
**Statistical Test of Difference Between**  
**Rhino Transactions and Those of Other Market Participants**  
**March 2001**

<u>All transactions</u>		<u>Rhino transactions</u>	
<u>Category</u>	<u>Actual</u>	<u>Actual</u>	<u>Expected (based on all)</u>
At Bid	1321	213	259.86
At Ask	1459	342	287.01
At Mid	204	32	40.13

Statistical test:  $\chi^2$  (critical value of 5% significance level 9.488).

P-value: 0.00

**Notes and Sources:**

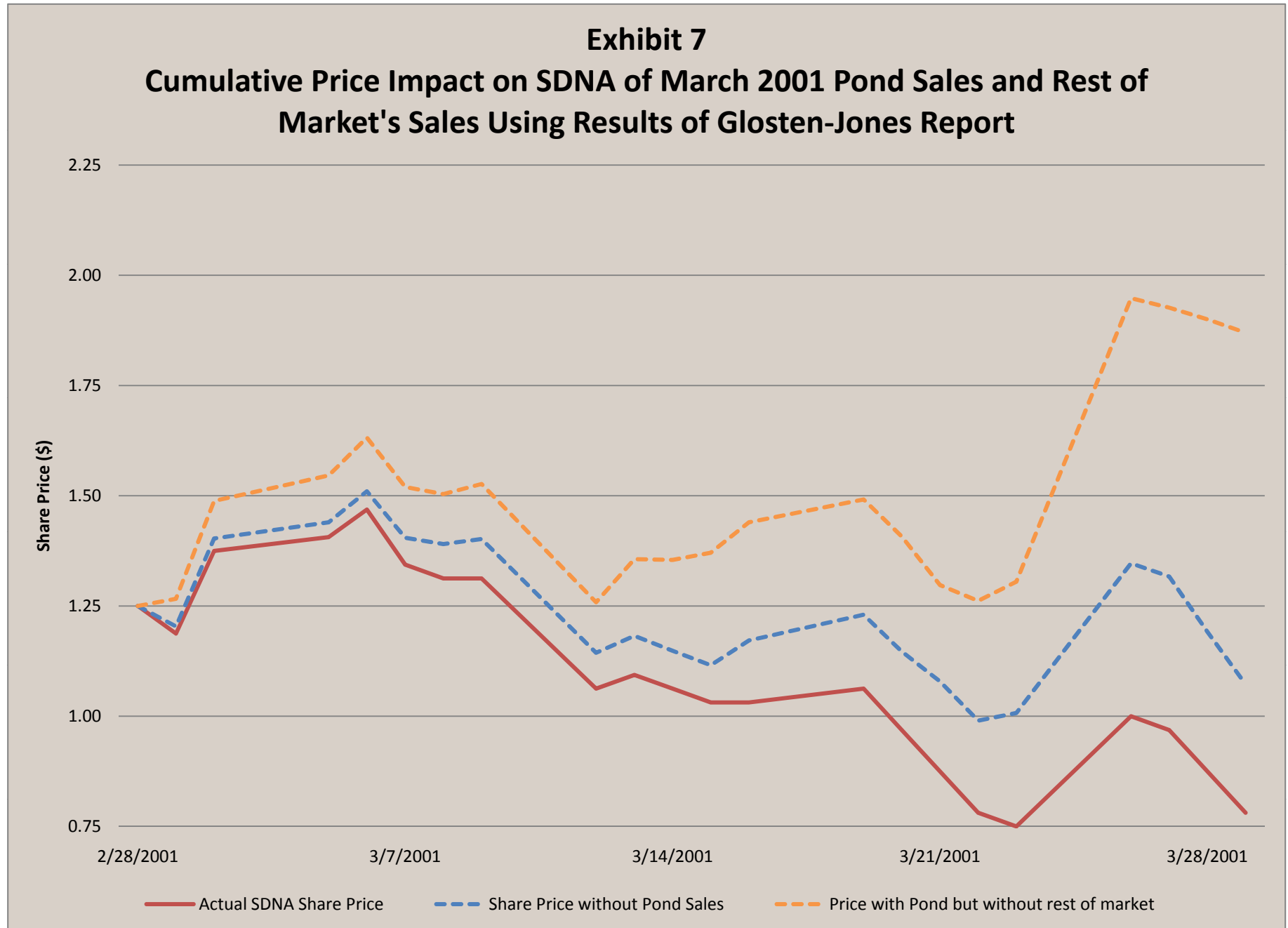
Breakdown of all transactions is based on categorization of 2,984 trades in database remaining after following procedures in paragraph 61 to the Glosten-Jones Report.  
Breakdown of Rhino's transactions is based on Exhibit 6 to the Glosten-Jones report.

**Exhibit 6**  
**Calculation of Market-Adjusted Price Movement**  
**March 20, 2001 - March 26, 2001**

<u>Date</u>	<u>Stock Price</u>	<u>Actual Stock Price Return</u>		<u>NASDAQ Composite</u>	<u>Nasdaq Composite Return</u>		<u>Predicted Stock Price Return</u>		<u>Abnormal Stock Price Return</u>		<u>t-statistic for Abnormal Stock Price Return</u>		<u>Cumulative Abnormal Stock Price Change</u>
		<u>Daily</u>	<u>Cumulative</u>		<u>Daily</u>	<u>Cumulative</u>	<u>Daily</u>	<u>Cumulative</u>	<u>Daily</u>	<u>Cumulative</u>	<u>Daily</u>	<u>Cumulative</u>	
3/19/2001	\$1.063			1,951.18									
3/20/2001	\$0.969	-0.092	-0.092	1,857.44	-0.049	-0.049	-0.023	-0.023	-0.069	-0.069	-0.826	-0.826	-\$0.064
3/21/2001	\$0.875	-0.102	-0.194	1,830.23	-0.015	-0.064	-0.009	-0.032	-0.093	-0.162	-1.103	-1.364	-\$0.146
3/22/2001	\$0.781	-0.113	-0.307	1,897.70	0.036	-0.028	0.011	-0.021	-0.125	-0.287	-1.485	-1.970	-\$0.248
3/23/2001	\$0.750	-0.041	-0.348	1,928.68	0.016	-0.012	0.003	-0.017	-0.044	-0.331	-0.526	-1.970	-\$0.278
3/26/2001	\$1.000	0.288	-0.061	1,918.49	-0.005	-0.017	-0.005	-0.022	0.293	-0.038	3.484	-0.204	-\$0.003

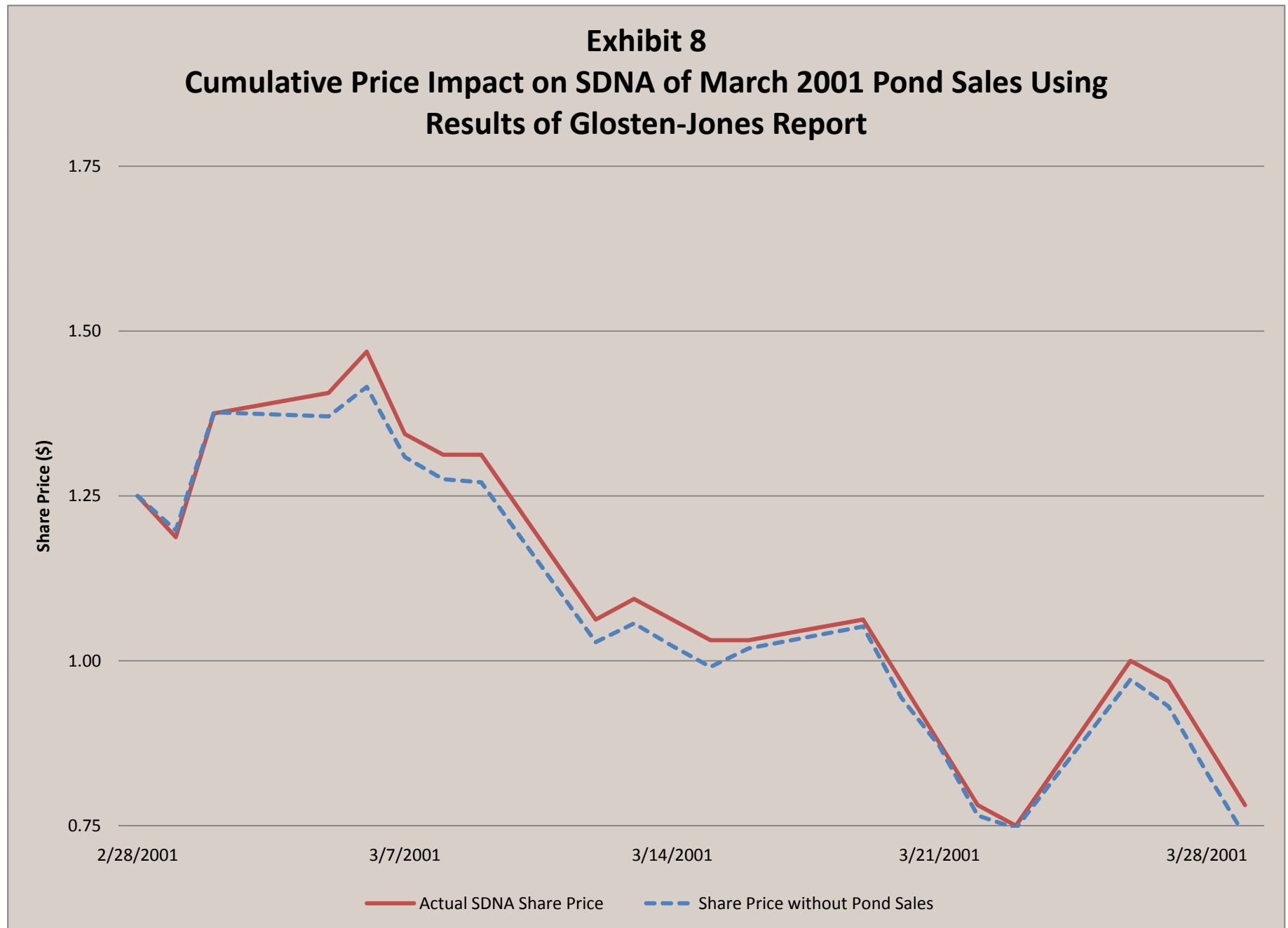
**Notes and Sources:**

Returns and t-statistics are calculated using a regression of the returns of Sedona's stock price on the returns of the NASDAQ Composite run over the period from June 26, 2000 through June 14, 2002.



This is a replication of the analysis in Exhibit 11 to the Glosten-Jones Report. This analysis includes all Pond sales at the bid (as identified in the Glosten-Jones Report) and the rest of the market's sales at the bid.





This is a replication of the analysis in Exhibit 11 to the Glosten-Jones Report. All inputs are as calculated in the Glosten-Jones Report. This analysis includes all Pond sales (as identified in the Glosten-Jones Report).